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(54) Forced Transmitting Terminal for Emergency

*** Partial Translation ***

[0010] For this reason, the antenna 1 is connected to a movable terminal 2a of the switching circuit 2 for switching these signals. In Fig. 1, the switching circuit 2 is illustrated like a mechanical switch, however, in actual practice, it is something that is electrically switching controlled by the control circuit 6. The movable terminal 2a of the switching circuit 2 is switchable to fixed terminals 2b and 2c. The fixed terminal 2b is connected to an input terminal of an ordinary receiving circuit 3. The receiving circuit 3 is connected to transmitters 7a and 7b used for converting circuit frequency.

[0011] In the likewise manner, the fixed terminal 2c of the switching circuit 2 is connected to an output terminal of the ordinary transmitting circuit 4. The transmitters 7a and 7b used for converting the circuit frequency is connected to this transmitting unit 4. Further, the fixed terminal 2d of the switching circuit 2 is connected to an output terminal of the forced transmitting terminal circuit 5. The receiving circuit 3, the transmitting circuit 4, the forced transmitting circuit 5 are provided on a portable telephone terminal as a wireless circuit, and the control circuit 6 controls reception data of the receiving circuit 3, transmission data of the transmitting circuit 4, and transmission data of the forced transmitting circuit 5.

[0012] The transmitters 7a and 7b are connected also to the forced transmitting circuit 5. That is, the control circuit 6 and the transmitters 7a and 7b are commonly connected to the receiving circuit 3, the transmitting circuit 4, and the forced transmitting circuit 5. A main power source 8 is being used as a power amplifier of the receiving

circuit 3 and the transmitting circuit 4. An auxiliary power source 9 is being used as a power amplifier of the forced transmitting circuit 5. The auxiliary power source 9 is a power source capable of supplying electricity at a high output.

[0013] Next, by referring to a system configuration chart of the communication system carrying out communication between the portable telephone terminal and the base station configured accordingly will be described for a system when carrying out the communication between a base station and a portable telephone terminal that requires communication forcedly in emergency situation. Referring to Fig. 2, the forced transmitting terminal for emergency 10 of the present invention is communication possible with the base station 11 via the connection line 15, at the same time, the other portable telephone terminals 12a to 12f scattered throughout are communication possible with the base station 11 via the respective connection lines 13a and 13f. The forced transmitting terminal for emergency 10 of the present invention and the portable telephone terminals 12a and 12b are scattered at its periphery. These forced transmitting terminal for emergency 10, and the portable telephone terminal 12a and 12b are scattered within the peripheral suppression effective range 14 of a strong field signal transmitted from the forced transmitting terminal for emergency 10.

[0014] Next, the operation of the first embodiment of the present invention will be described, together with Figs. 1 and 2. Provided that the forced transmitting terminal for emergency 10 is located within the range covered by the base station 11, and the connection lines connectable by the base station 11 are all occupied by the other portable telephone terminals 12a and 12f that are connectable by the base station 11. Under such circumstance, even if the forced transmitting terminal for emergency 10 is transmitted by the ordinary transmitting circuit 4, a connection line 15 cannot be secured between the base station 11 and the forced transmitting terminal for emergency 10. That is, the forced transmitting terminal for emergency 10 is in the non-communication possible situation.

[0015] Under this situation, in case that the user decides an emergency situation, an operation of the forced transmission (for example, an operation for pressing down an emergency button provided adjacent to a number button), then a transmission command for forced transmission

is input to the control circuit 6. The control circuit 6 that received the forced transmission command, at first, transmits an instruction to the switching circuit 2, and its movable terminal 2a is connected to the fixed terminal 2d, and the forced transmission circuit 5 is connected to the antenna 1. Next, the control circuit 6 transmits the transmission data to the forced transmission circuit 5. The transmission data transmitted to the forced transmission circuit 5 is converted to a line frequency by the transmitters 7a and 7b used for frequency conversion.

[0031] Next, an operation of the third embodiment will be described with reference to Fig. 4. A peripheral suppression effective range in case that the forced transmitting terminal for emergency 10 of the third embodiment of the present invention radiating a strong field signal at a maximum output, its is symbolized as a peripheral suppression effective range 14c. In case that the output is weakened stepwisely, the peripheral suppression effective range is symbolized as the peripheral suppression effective ranges 14b and 14a. An intensity of the strong field signal output radiated from the antenna 1 is as follows: $14c > 14b > 14a$. When the strong field signal is radiated from the antenna 1 at the maximum output from the forced transmission circuit 5, the two portable telephone terminals of the other portable telephone terminals 12a and 12b within the peripheral suppression effective range 14c is affected by it, and the communication is interrupted.

[0032] The objective of the present invention resides in securing the emergency line no matter how congested the connection lines are, so that there is a need to suppress an influence that have on the other portable telephone terminals as much as possible. Then, also in case of Fig. 4, since there is only one available connection line that need be secured, therefore, two connection lines of the connection lines 13a and 13b will be disconnected. In order to disconnect one connection line only, the size of peripheral suppression effective range 14c is adjusted to the size of peripheral suppression effective range 14b, so that this allows only the connection line 13a to be disconnected. As a procedure for adjusting the peripheral suppression effective range 14b, there is the method of gradually intensifying the strong electric filed signal.

【発明の効果】以上のように、この発明によれば、緊急用の接続回線が整備されていない場所において、優先して通話をする必要がある場合に接続回線を確保することが可能であるという第1の効果が得られる。その理由は、一般の接続回線を使用して一時的に他の接続回線を排除して自接続回線を確保するためである。また、利用可能な周波数すべてを一般に割り当てることが可能となるとともに、すでに緊急用接続回線があるものはその接続回線を一般に割り当ててことで普段使用できる接続回線数を増やすことが可能になるという第2の効果を奏する。その理由は、緊急用と一般用の接続回線を用途により区別する必要がなくなるためである。さらに、緊急時以外でも通常に使用することが可能であるという第3の効果を奏する。その理由は、この発明に特化する接続回路が通話に関係する部分ではないため、この発明に特化する接続回路を使用しなければ、私用で使ったとしても、公益を害することはなく、他の一般の携帯電話端末と同じであるためである。

* 【図面の簡単な説明】

【図1】この発明による緊急用強制送信端末の第1実施の形態の構成を示すブロック図である。

【図2】図1に示した緊急用強制送信端末の第1適用例を示す通信システムの構成説明図である。

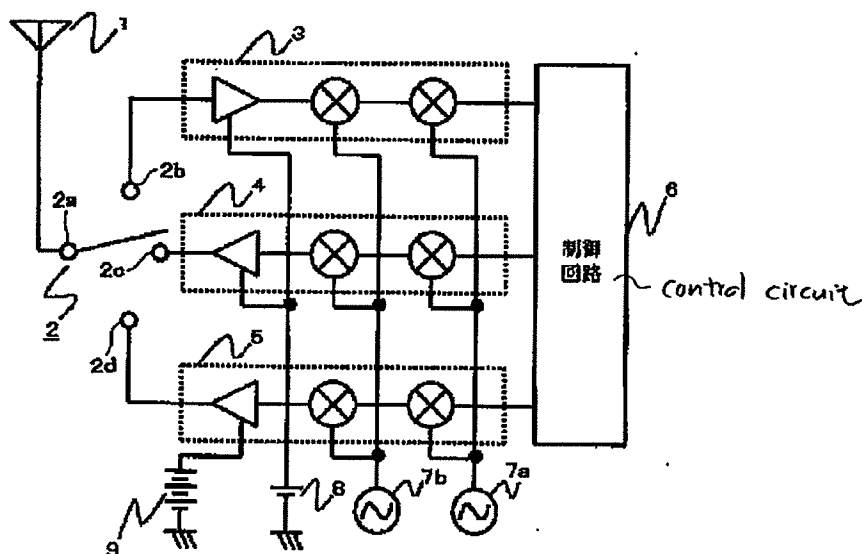
【図3】図1に示した緊急用強制送信端末の第2実施の形態に適用される通信システムの構成説明図である。

【図4】図1に示した緊急用強制送信端末の第3実施の形態に適用される通信システムの構成説明図である。

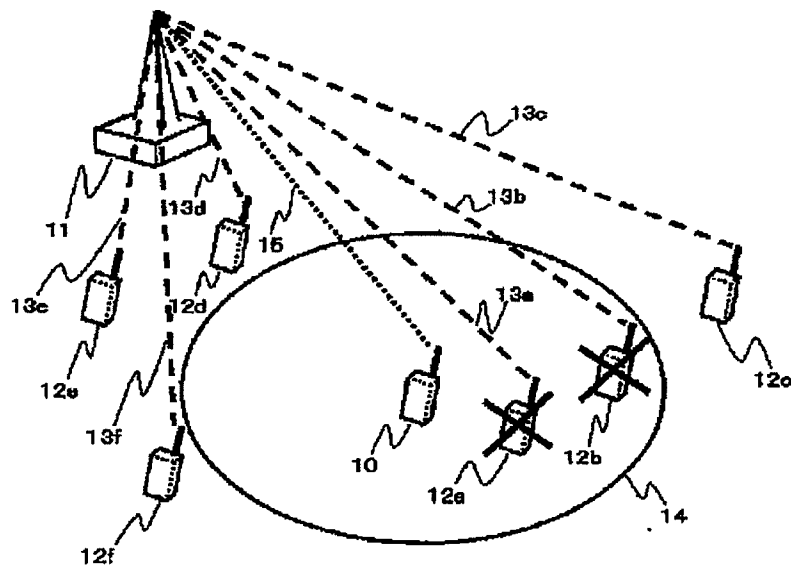
10 【符号の説明】

1……アンテナ、2……スイッチング回路、3……受信回路、4……送信回路、5……強制送信回路、6……制御回路、7a、7b……周波数変換用の発信機、8……主電源、9……補助電源、10……緊急用強制送信機、11、11a、11b……基地局、12a～12f……他の携帯電話端末、13a～13f、15、15a、15b……接続回線、14、14a～14c……抑圧有効範囲。

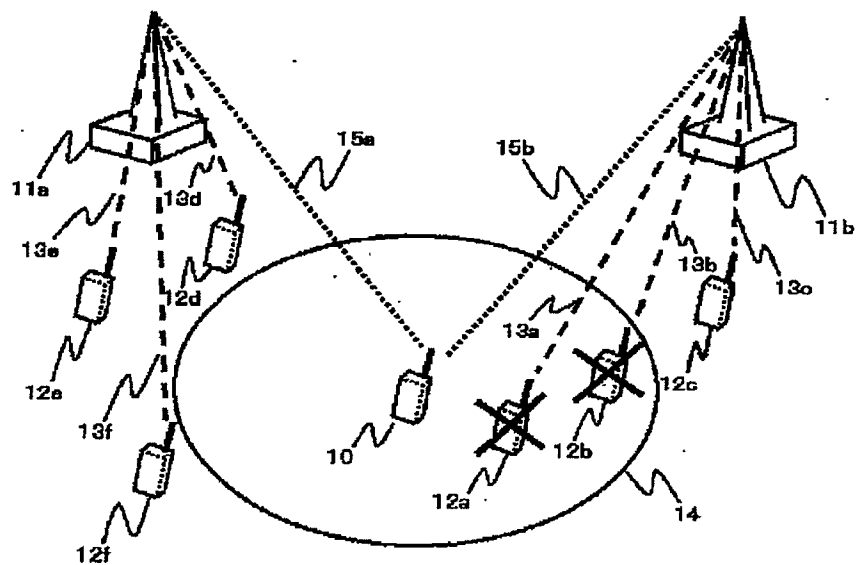
【図1】～FIG.1



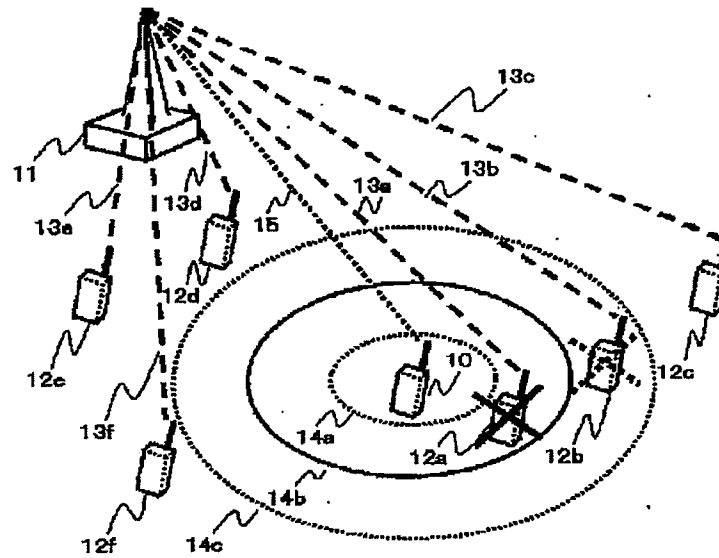
【図2】 ~ FIG.2



【図3】 ~ FIG.3



【図4】 ~ FIG. 4



フロントページの続き

F ターム(参考) 5C087 BB12 BB18 BB40 BB64 BB74
 DD03 DD35 EE06 EE14 FF01
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 GG83
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 5K067 AA35 DD27 DD28 EE02 GG06
 GG08 GG22 JJ17 JJ20